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ABSTRACT

This annotated bibliography presents Great Lakes information for grades six through nine classroom use. It is meant to facilitate and encourage Great Lakes study, particularly of Lakes Michigan and Superior. Material is presented on history, science, lake management, environmental concerns, and recreational use. Included are both fiction and nonfiction books; films; maps and charts; booklets; pamphlets; paperbacks; and serials. No scientific materials are included with a copyright prior to 1970. (BB)

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Educators' Guide to Great Lakes Materials

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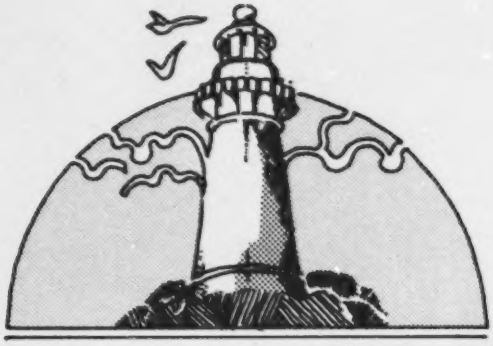

Educators' Guide to Great Lakes Materials

Books, films, maps and pamphlets
for classroom use.

By Pam Johnson

UNIVERSITY OF WISCONSIN SEA GRANT COLLEGE PROGRAM
Publication #600
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FOREWORD

The Great Lakes provide a microcosm for the study of many subjects: geography, history, geology, biology, environmental problems and concerns, economics and the politics of international cooperation, to name a few. Classroom study of the Great Lakes has been inhibited, however, by a lack of readily accessible teacher aids. This bibliography, therefore, is an attempt to provide 6th through 9th grade educators with a handy guide to sources of Great Lakes information suitable for classroom use. It is meant to facilitate and encourage Great Lakes studies, particularly on Lakes Michigan and Superior.

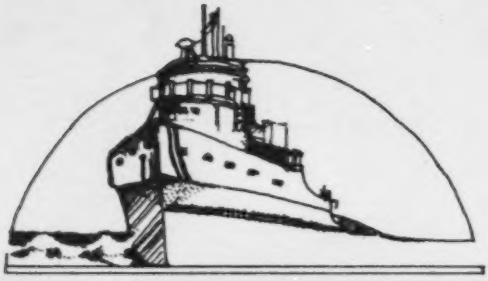
The initial intent of this bibliography was to collect material on all aspects of the Great Lakes: history, art, science, lake management, environmental concerns and recreational use. Indeed, much information was found on Great Lakes history, vessels and shipping, fish and fishing, glacial effects and pollution—as the content of this bibliography reflects. In certain subject areas, however, suitable material is either nonexistent or remains in a form more suitable for teacher background than classroom use. For this reason there is little on Great Lakes folklore, the Indians of the Great Lakes region or art generated in the Great Lakes region; and nothing on careers relating to or recreational use of the Great Lakes.

For the most part the materials cited here are contemporary since so much of the older material is either out of date or unavailable. No scientific materials are included with a copyright prior to 1970. This restriction was relaxed somewhat for fictional and historical materials because of their relatively timeless nature. The oldest copyright is 1939; five entries are dated from the 1940s; and the rest are from 1953 to date.

An attempt was made to include materials that would be readily accessible to an educator. For this reason some books are included even though they are out-of-print because they can be found in several public and school libraries. Some popular titles, though not recommended, are included in order to eliminate useless searching. And finally, because the intellectual level of 6th through 9th graders varies somewhat, some materials are included that offer a more basic, introductory approach, while others that are included offer more depth. In this way, the educator is allowed maximum flexibility in the presentation of a curriculum unit.

Various sources were tapped in the preparation of this bibliography: public and school libraries, bookstores, maritime and historical museums, the resources of other university Sea Grant programs, the offices of Great Lakes organizations in both the United States and Canada and environmental educators in various Wisconsin school districts.

Pam Johnson



Books - Nonfiction

1 Adams, Samuel Hopkins. **The Erie Canal.** Illus. by Leonard Vosburgh. New York: Random House, 1953. 182 pp.

Text: 4 pp. index, tri-color line drawings.

A history of the Erie Canal from its conception to the present. Unlike #3, this book does not go into the demise of the canal. The easy-to-read narrative uses large print, numerous illustrations and a human interest approach to provide a basic, yet comprehensive presentation on the subject suitable for 5th-7th grade reading. See also #38.

2 Adamson, Wendy Wriston. **Saving Lake Superior: A Story of Environmental Action.** Minneapolis: Dillon, 1976 (2nd edition). 77 pp.

Text: 2 pp. bibliography, 1 p. notes, 1 p. glossary, b&w photos.

An account telling how Americans along Lake Superior organized in 1969 to let the nation know of their concern over the dumping of taconite tailings into the lake by Reserve Mining. An environmental case study written at a jr. high level that encourages citizen action. See also #37 and #59.

3 American Heritage, ed. **The Erie Canal.** New York: American Heritage, 1964. 153 pp.

Text: 3 pp. index, 1 p. "further reading," b&w and color line drawings and photos.

A complete history of the Erie Canal from construction to relative disuse. Generously illustrated, this book provides a more attractive format than #1; however, the text is written for a more advanced reader (approximately 7th-9th grade). See also #38.

4 Ault, Phil. **These are the Great Lakes.** New York: Dodd, Mead, 1972. 175 pp.

Text: 2 pp. index, 2 pp. bibliography, b&w photos and map.

In brief chapters the author touches on the highlights of Great Lakes history: glacial beginnings, shipwrecks, lampreys and alewives, the locks, Christmas tree ship, the S.S. EASTLAND, pollution. Provides an easily understood overview. See also #7, #58, #62, #101 and #106.

5 Barry, James P. **The Battle of Lake Erie, Sept. 10, 1813: The Naval Battle that Decided a Northern U.S. Boundary.** New York: Franklin Watts, 1970. 64 pp.

Text: 3 pp. index, 2 pp. bibliography, b&w line drawings and photos.

A factual presentation of the events surrounding the battle of Lake Erie. Although rather dry compared to #48, this book is a well researched description of the battle written for the adolescent reader.

6 Barry, James P. **The Fate of the Lakes: A Portrait of the Great Lakes.** Grand Rapids: Baker, 1972. 192 pp.

Text: 3 pp. index, 7 pp. bibliography, b&w and color photos.

This book provides detailed commentary on the present state of the Great Lakes and St. Lawrence Seaway, a pictorial album of these waterways, a look at problems of ecology and pollution with a view toward the future, plus a discussion of the economics of shipping and the Seaway. Suitable for more in-depth study of the Great Lakes—9th grade and up.

7 Barry, James P. **The Great Lakes.** New York: Franklin Watts, 1976. 62 pp.

Text: 4 pp. index, b&w maps, diagrams and photos.

Written at a 4th-6th grade level, this book describes and illustrates lock operation, touches on lake pollution, discusses Great Lakes shipping and industries and includes some historical information. An objective "first book" introduction to the Great Lakes. See also #4, #58, #62, #101 and #106.

8 Barry, James P. **Ships of the Great Lakes: 300 Years of Navigation.** Berkeley: Howell-North, 1973. 256 pp.

Text: 5 pp. index, 10 pp. "bibliography and notes," 228 b&w photos, line drawings, charts and maps.

According to the author this book was written to "show how water-borne transport, over a period of more than three centuries, has responded to the social, political, economic and technological forces in the Great Lakes region." Good source of illustrations but narrative is only for the serious student who wants detail. See also #17 and #36.

9 Bowen, Dana Thomas. **Lore of the Lakes: Told in Story and Pictures.** Daytona Beach: DTB, 1940. 314 pp.

Text: 4 pp. index, approximately 100 b&w photos. Chapter one is a 17 pp. chronology (1492-1940).

Miscellaneous tidbits about Great Lakes history. Any chapter could be used to fill out a curriculum unit. See also #4, Bowen's other books and Boyer's books.

10 Bowen, Dana Thomas. **Memories of the Lakes: Told in Story and Picture.** Cleveland: Freshwater Press, 1967. 292 pp.

Text: 6 pp. index of ships, 4 pp. bibliography, 63-page section of b&w photos, 5 (sailing) distance charts.

This book is comprised of chapters on Great Lakes firsts, several major storms, a Soo Locks accident, etc. The book could be used sectionally for curriculum units or recommended for reading (9th grade up). See also #4, Bowen's other books and Boyer's books.

11 Bowen, Dana Thomas. **Shipwrecks of the Lakes.** Cleveland: Freshwater Press, 1952. 368 pp.

Text: 6 pp. index of ships, 55 b&w photos.

Using new material not contained in either of his other two books (#9 or #10), the author lucidly describes the events surrounding the various Great Lakes shipwrecks—time, weather, extenuating circumstances, etc. To be used in part for curriculum units or recommended as a whole for the avid shipwreck fan (8th grade and up). See also #12, #16, #34 and #83.

12 Boyer, Dwight. **Ghost Ships of the Great Lakes.** New York: Dodd, Mead, 1968. 294 pp.

Text: 13 pp. index, 3 pp. bibliography, b&w photos and maps.

Tales of Great Lakes vessels (13-21 pp. each in length) which sank leaving no survivors. Well researched and lucidly written accounts that could be used individually or recommended in their entirety (8th grade and up). See also #11, #16, #34 and #83.

13 Boyer, Dwight. **Great Stories of the Great Lakes: Thrilling Tales of Tragedy, Humor and Heroism on the World's Greatest Fresh-Water Seas.** New York: Dodd, Mead, 1966. 242 pp.

Text: 8 pp. index, 3 pp. bibliography, 15 b&w photos, simple line drawings and maps.

The author uses large print and an easy writing style to tell of events that happened on the Great Lakes. A source of material for a literature or history class or of recommended reading for 8th grade and up. See also #4, Bowen's books and other Boyer books.

14 Boyer, Dwight. **Ships and Men of the Great Lakes.** New York: Dodd, Mead, 1977. 208 pp.

Text: 10 pp. index, 3 pp. bibliography, b&w photos.

Boyer does not go under water to solve the mysteries of various sinkings and mishaps of the Great Lakes. He does, however, provide thoroughly researched, succinct and highly readable accounts of whatever tale he chooses to tell. This, his latest book, covers not only the sinkings of the S.S. EDMUND FITZ-GERALD, the S. S. SOO CITY and the S.S. DANIEL J. MORRELL, but also the experiences of such Great Lakes seafarers as John Maynard and Dennis Hale. Good reading as a whole or in part. See also the other Boyer and Bowen books.

15 Boyer, Dwight. **Strange Adventures of the Great Lakes.** New York: Dodd, Mead, 1974. 248 pp.

Text: 10 pp. index, 2 pp. bibliography, b&w photos and drawings.

A source of very readable stories about vessels on the Great Lakes. To be recommended for reading as a whole (9th grade up) or in sections to fill out a curriculum unit. See also the other Boyer and Bowen books.

16 Boyer, Dwight. **True Tales of the Great Lakes.** New York: Dodd, Mead, 1971. 340 pp.

Text: 13 pp. index, 3 pp. bibliography, b&w photos.

In this book the author goes beyond hearsay to the words and experiences of the people involved. Especially noteworthy are the large section on the November 1913 storm, which comprises approximately one-third of the book, and the description of the S.S. EASTLAND disaster that incorporates actual courtroom testimony. To be used in sections for curriculum units or recommended as a whole for reading (9th grade up). See also the other Boyer and Bowen books.

17 Buehr, Walter. **Ships of the Great Lakes.** Illus. by Lemuel B. Line. New York: Putnam, 1956. Approximately 50 pp.

Text: Full color line drawings and lists for each illustration which cite length, cargo capacity, horsepower, speed.

The introduction provides historical material on the early Great Lakes and a view of navigation and shipping in the 1950s. Good source of illustrations of Great Lakes vessels as they used to be. See also #8 and #36.

18 Carse, Robert. **The Great Lakes Story.** New York: Norton, 1968. 97 pp.

Text: 5 pp. index, 40 b&w photos give a chronology of Great Lakes history (1673-1960).

A portrait of Great Lakes shipping that describes the realities of transporting cargo—loading and unloading, the role of the seamen, the hazards of lake travel, etc.—rather than providing vessel description. An excellent beginner's source of this kind of information geared to the jr. high reader. See also index under SHIPPING.

19 Ela, Jonathan. **The Faces of the Great Lakes.** Illus. by B. A. King. San Francisco: Sierra Club, 1977. 192 pp.

Text: b&w and color photos.

A motley collection of articles written and chosen for their copy value rather than in an effort to say anything definitive about the Great Lakes. No aspect of the Great Lakes is found here that is not covered by other items in this bibliography, e.g., PCBs, pollution, history, etc. The 91-page section of photos appended at the end could serve as a source of quality b&w and color illustrations of the Great Lakes environment. In summary, however, this book was written to sit on a coffee table rather than to serve as a source of material on the Great Lakes for the classroom.

20 Ellis, William Donohue. **Land of the Inland Seas: The Historic and Beautiful Great Lakes Country.** Palo-Alto: American West, 1974. 285 pp.

Text: 5 pp. index, ¾ pp. "suggested readings," over 200 b&w and color photos, 1 pp. chronology (1000-1073), charts and maps: geological history, major Indian tribes, early exploration routes, missionary travels, fur trading posts, War of 1812.

The scope of this book extends from the retreat of the Wisconsin glacier 15,000 years ago to the building of Minnesota's Experimental City scheduled for completion in 1985. Although lengthy, this book is a good source of illustrations, charts and maps.

21 Elms, F. Raymond. **Let's Explore the Great Lakes.** Chicago: Albert Whitman, 1953.

Text: tri-color line drawings and maps.

A dated source of basic Great Lakes history. Much better sources are #4 and its cross references.

22 Franchere, Ruth. **Westward by Canal: The Story of the Great Canal Era.** New York: Macmillan, 1972. 149 pp.

Text: 3 pp. index, 2 pp. "further reading," two 5-page sections of b&w photos of old drawings, b&w map of major canal routes.

Covers all the different canals connecting the Great Lakes with inland cities. Tells how the canals were built and how they speeded up migration to the Midwest. Short, clear chapters, written for jr. high readers, describe the era 1817-1850. See also #1, #3 and #38.

23 Hatcher, Harlan and Erich A. Walter. **A Pictorial History of the Great Lakes.** New York: Crown, 1963. 344 pp.

Text: 4 pp. index, 1 p. bibliography, 500 b&w photos, 2 pp. Great Lakes chronology (1535-1959).

An oversize book that organizes several hundred photos of the Great Lakes region into chapters on geology, history, vessels, cities, locks, etc. A good source of illustrations and miscellaneous tidbits of information to accompany more literary sources of information, like #4 and its cross references.

24 Havighurst, Walter. **The Great Lakes Reader.** New York: Macmillan, 1966. 421 pp.

Text: center section of 16 b&w photos.

This book captures the highlights of Great Lakes history in 2-4 page excerpts from journals, old books, newspapers, etc. These excerpts were written by missionaries, enterprising women, survivors of wars, slaughters or grueling passages over the lakes. A source of firsthand accounts that would compliment any curriculum unit on Great Lakes history.

25 Havighurst, Walter. **The Long Ships Passing; The Story of the Great Lakes.** Illus. by John O'Hara Cosgrave II and Jane Chamberlin. New York: Macmillan, 1975 (revised and expanded edition). 360 pp.

Text: 21 pp. index, 4 pp. bibliography, b&w line drawings.

A detailed history of the Great Lakes that would be more suitable for sr. high school reading. Better sources for jr. high reading are #4 and its cross references.

26 Howell, Charles E. **Land of the Great Lakes.** San Francisco: Harr Wagner, 1964. 203 pp.

Text: color drawings, 2 pp. pronouncing dictionary.

Written as a school text. With things to talk about and things to do, this book tells the history of the Great Lakes from beginning to present in a narrative on a family boating tour. An unattractive format and unwieldy approach to the subject.

27 Judson, Clara Ingram. **St. Lawrence Seaway.** Illus. by Lorence F. Bjorklund. Chicago: Follett, 1964 (revised edition). 160 pp.

Text: b&w drawings and photos.

The history of the St. Lawrence Seaway is told in the context of the total history of the Great Lakes: how the need for the Seaway arose, political problems, construction obstacles, etc. Although somewhat dated, this book provides excellent background history for jr. high. See also #72, #85 and #99.

28 Kubiak, William J. **Great Lakes Indians: A Pictorial Guide.** Grand Rapids: Baker, 1970. 225 pp.

Text: 5 pp. index, 3 pp. bibliography, 4 pp. list of Indian tribal names, b&w color line drawings, chronology of prehistoric Indians 8000 B.C.-1600 A.D.).

Combining narrative and illustration, this book provides information on dwellings, dress, physical features, cultural characteristics, plus authentic historical data on three linguistic stocks known to have lived in the Great Lakes region: Algonquian, Iroquoian, Siouan. The best source of information on Great Lakes Indians suitable for 6th-9th grade use.

29 Lamour, John. **Great Lakes Log.** v. 1 & 2. Monroe, MI: Lamour Printing, 1971, 1973. 53 pp., 101 pp.

Text: made up entirely of 3x4 in. drawings—v. 1 has 53 drawings, v. 2 has 101.

These drawings have appeared in American and Canadian papers since 1967. Included are drawings of vessels, lighthouses, maps, highlights of Great Lakes history. An illustrative approach to Great Lakes history.

30 Lent, Henry B. **Men at Work in the Great Lakes States.** New York: Putnam, 1958. 128 pp.

Text: 2 pp. index, b&w photos.

Describes the work of men in various industries—iron, glass, car, etc.—in chapters of 3-6 pages each. Written at a 4th grade level, the material is too elementary for jr. high use and grossly out-of-date.

31 Mabee, Carleton. **The Seaway Story.** New York: Macmillan, 1961. 301 pp.

Text: 7 pp. index, 25 pp. notes on chapters, 22 b&w photos, 3 maps.

A history of the Seaway from glacial formation to 1961. Shows how locks operate, how bridges were lengthened, how houses were moved and discusses politics at work on both sides of the Seaway, with emphasis on the American point of view. More suitable for sr. high use. See instead #27, #72, #85 and #99.

32 McPherson, Marie. **Cargoes on the Great Lakes.** New York: Bobbs-Merrill Co., Inc., 1952. 226 pp.

Text: 4 pp. index, list of big "new" ships, b&w line drawings.

A narrative on Great Lakes shipping written as a description of what a group of children see while on a trip in the Great Lakes region. The outdated information, unwieldy format and childish illustrations combine to make this book a poor choice. See instead index under SHIPPING.

33 Myers, Linda and Outdoor World editors. **The Great Lakes: North America's Inland Seas.** Waukesha: Outdoor World, 1974. 192 pp.

Text: 1 pp. index, over 65 full color photos, 85 b&w photos.

One chapter is devoted to each lake. Includes information about the glacial age, industries, missionaries, points of special interest, national, federal and state forests, monuments. Contains more information than necessary for classroom use.

34 Ratigan, William. **Great Lakes Shipwrecks and Survivals.** Illus. by Reynold H. Weidenaar. Grand Rapids: Eerdmans, 1960. 300 pp.

Text: 5 pp. index, 10 b&w illustrations.

This book is divided into five sections: one for each lake plus a section of general observations about shipwrecks and survivals. The story of each shipwreck is told in well-written vignettes of 2-8 pages each. Could be recommended for reading as a whole (8th grade up) or used in parts to supplement material in #11, #12, #16 and #83.

35 Ratigan, William. **Straits of Mackinac! Crossroads of the Great Lakes.** Grand Rapids: Eerdmans, 1957. 136 pp.

Text: b&w photos.

A source of historical, but otherwise outdated, information on the straits.

36 Stanton, Samuel Ward, illus. **Great Lakes Steam Vessels.** Upper Montclair, NJ: Kneeland Whiting, 1962. 49 pp.

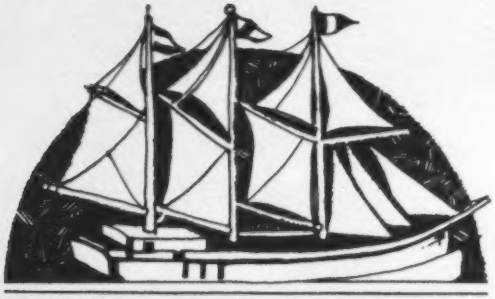
Text: b&w line drawings of vessels roaming the Great Lakes from 1818-1896, lists for each vessel: where built, number of tons, company worked for, use and final fate.

Another source of Great Lakes vessels illustrations. See also #8 and #17.

37 Steinhacker, Charles, photographer. **Superior: Portrait of a Living Lake.** Ed. by Arno Karlan. New York: Harper & Row, 1970 (2nd edition). 118 pp.

Text: 70 full color photos.

Designed to present an argument for conservation and saving of the environment, the book juxtaposes excellent quality photos of contemporary Lake Superior with writings in diaries, journals, etc. dating from 1650-1880. The photos capture the best features of the lake. See also #2 and #59.



Books - Fiction

Fiction about the Great Lakes is hard to find; indeed, all the novels listed below except #40 are out-of-print. They are included in the bibliography because they were found in the collections of public and school libraries.

38 Adams, Samuel Hopkins. **Chingo Smith and the Erie Canal.** Illus. by Leonard Vosburgh. New York: Random House, 1958. 276 pp.

A tale of the adventures of a 10-year-old boy growing up along the Erie Canal, peppered with earthy characters reflecting the demands and difficulties of pioneer life. A realistic, easily read portrayal of life along the Erie Canal suitable for jr. high reading. For nonfiction about the canal see #1 and #3.

39 Brock, Emma L. **Then Came Adventure.** New York: Knopf, 1941. 184 pp.

A group of Scandinavian children living along Lake Superior have numerous adventures while pretending to be pirates, detectives, campers, etc. The use of dialect, the flatness of the characters and a meager plot combine to make this book a poor choice for the contemporary adolescent reader.

40 Holling, Holling C. **Paddle-to-the-Sea.** New York: Houghton, 1941. 63 pp.

The adventures of a wooden canoe, carved by a boy who lives high on the Canadian side of Lake Superior and launched with the hope that it would reach the Atlantic Ocean. Although written at a 4th-6th grade level, this book is well researched and provides an excellent fictional description of the Great Lakes region. It should be mentioned when showing film #62.

41 Kjelgaard, Jim. **The Spell of the White Sturgeon.** New York: Dodd, Mead, 1953. 197 pp.

Lake Michigan provides the setting for this novel about commercial fishermen of the early 19th century when fish was still packed in salt. Written in Kjelgaard's action-packed, lucid style. See also #60.

42 Lawrence, Mildred. **Peachtree Island.** Illus. by Mary Stevens. New York: Harcourt Brace, 1948. 224 pp.

Second to 4th grade reading of the Bobbsey Twins genre.

43 Meader, Stephen W. **Boy With a Pack.** Illus. by Edward Shenton. New York: Harcourt Brace, 1939. 297 pp.

The adventures of 17-year-old Bill Crawford as he traces the length of the Erie Canal from New Hampshire to Ohio on foot in 1837. The heavy use of pioneer dialect hampers easy reading. See instead #38.

44 Newton, Stan. **Paul Bunyan of the Great Lakes.** Chicago: Packard, 1946. 188 pp.

Thirty stories (2-3 pages each) arranged as a continuous saga. These stories contain all the flavor of this legendary character.

45 Oberreich, Robert. **The Blood Red Belt.** Illus. by Geoffrey Biggs. New York: Doubleday, 1961. 143 pp.

Two young boys—one white and one Indian—team up to recover an Indian artifact used when tribes go to war. An easily read, mildly suspenseful story.

46 Prescott, John B. **The Beautiful Ship: A Story of the Great Lakes.** Illus. by Allan Thomas. New York: Longmans, Green, 1952. 183 pp.

A story of a fisherman's family living around the time of the invasion of the sea lamprey. Just below 6th grade reading. See also #41.

47 Rietveld, Jane. **Great Lakes Sailor.** New York: Viking, 1952. 188 pp.

Milwaukee (1844) provides the setting for a boy's adventures as an apprentice sailor. Toward the end of the book, the boy returns reluctantly to his family to wait out the winter. Once there, however, he decides that a person is happiest where he should be, in this case: "summers on sea, winters at home." Although not the most exciting book, it provides an adequate fictional portrayal of life on a Great Lakes vessel. Juxtapose with the realities of #14 and #18.

48 Van Wyck Mason, F. **The Battle of Lake Erie.** Illus. by Victor Mays. Boston: Houghton-Mifflin, 1960. 181 pp.

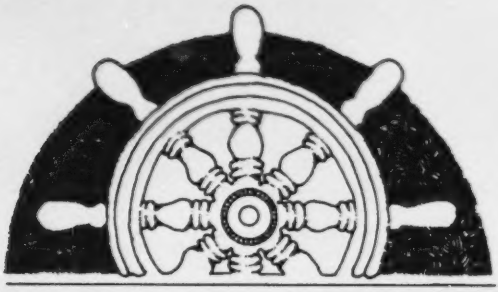
In an easy, clear style aimed at the adolescent reader, the author aptly describes the battle of Lake Erie and the events that preceded it. The narrative captures the agony and hardships of war and incorporates all the suspense of battle. See also #5.

49 Vukelich, George. **Fisherman's Beach.** New York: St. Martin's Press, 1962. 186 pp.

In this picture of family conflict, an elderly, dying man is trying to decide which of his two sons should inherit his fisherman's beach—Germaine, the eldest, who for years has been stationed in Europe, or Roger, an ambitious, brutal person, who wants both the beach and Germaine's fiancée. This portrayal of a family of strong characters, closely united yet at war among themselves, is set in a period when the Great Lakes fishing industry is suffering from the invasion of the sea lamprey. The plot is one more suitable for high school reading. See also #41.

50 Wilson, Holly. **Caroline the Unconquered.** New York: Julian Messner, 1956. 189 pp.

In 1853 Caroline Morgan sets out from Detroit to Lake Superior country where her father is mining iron. Along the way she is aided by and falls in love with Johnny Coyne. They encounter several obstacles to their love, but marry in the end. A satisfying, standard romance and pioneer story (8th grade up).



Films

The following listing is composed of 16 mm, color, sound films—with one exception (#65). The numbers in brackets correspond to the list of addresses provided at the end of this bibliography and indicate where the films can be obtained. Although sources for obtaining films are listed where possible, local sources such as libraries and schools should also be checked.

51 **The Aging of the Lakes.** Encyclopedia Britannica Education Corp., 1971. 13 min. [1]

Not limited in scope to the Great Lakes, this film defines narratively and documents visually the myriad pollution problems faced by lakes. The generalizations about lake problems are brought home to the Great Lakes in such examples as the description of Chicago's efforts to combat pollution and the mention of thermal pollution, especially on Lake Michigan. A short, factual introduction to pollution problems on lakes without the "gloom and doom" approach of #67 and #69. See also #56.

52 **Apostle Islands Region.** Wisconsin Department of Research and Development, 1964. 27 min. [1]

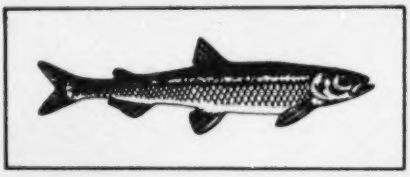
This film stresses the environmental beauty of these islands. The message is to save this region for the enjoyment of posterity. A low-keyed approach utilizing straight narrative and film footage: no animation or music.

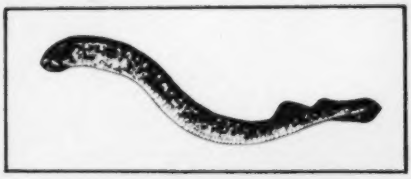
53 **Can We Fish Again?** U.S. Environmental Protection Agency—Region V, 1977. 15 min. [5]

An examination of the forces adversely affecting fishing on the Great Lakes: lampreys, toxic substances, etc. Provides a clear description of PCBs and documents how they have endangered Great Lakes fishing. The narrator, Bob Osborne, presents only the concern of the sports fisherman and attempts to encourage citizen action, but unfortunately glosses over the direction this action might take. Could be presented in conjunction with #60.

54 **Fishing Five Great Lakes.** Craven Films, 1962. 28 min. [13]

This film first presents short vignettes on the various methods commercial fishermen employ on each of the Great Lakes. It then delineates different ways man has disturbed the evolution of fish populations on the lakes: introduction of lampreys and smelt, erosion problems due to farming and burning timber and industrial pollution. Lastly, ways of promoting the eating of Great Lakes fish—canning, freezing, smoking—are shown. Though somewhat dated by fashion, with a corny musical background, the movie could be used as introductory material. See also index under FISHING.





55 **The Great American Fish Story: The Lakes and Rivers.** Image Association, 1976. 28 min. [13]

Though not limited to Great Lakes fishing, more than three-fourths of the film examines this aspect of freshwater fishing. The film includes brief mention of the research on producing fish in a farm setting, description of the smoking of fish and a section documenting the festivities surrounding a boiled fish dinner. Although the film covers a wealth of material, it has a tendency to be disjointed, both because it jumps from one subject to another and because it attempts to incorporate seemingly irrelevant film clips: a bicentennial celebration at Port Washington, Wisconsin, a clip on Hannibal, Missouri, etc. See also index under FISHING.

56 **The Great Clean-Up.** U.S. Environmental Protection Agency/Environment Canada, 1976. Two reels, 54 min. [12]

An account of some of the projects which have resulted from the April 15, 1972 joint agreement of the U.S. and Canada to clean up the Great Lakes. In addition, the film provides a brief history of the events leading up to this agreement, as well as a background picture of the environs of the Great Lakes. Although somewhat long for regular classroom use, this film represents a vast improvement over such films as #67 and #69 in that it not only presents the problems but also shows what is possible by way of solution. See also #2, #51, #100 and #101.

57 **Great Lakes: How They Were Formed.** Grubbs, no date. 12 min.

An animated explanation of how the glaciers affected the formation of the Great Lakes, especially Niagara Falls and Sault Ste. Marie. Though the filming techniques are dated—straight film and narration only—the film provides one of the few introductions to Great Lakes geology available. See also #63, #73 and #87.

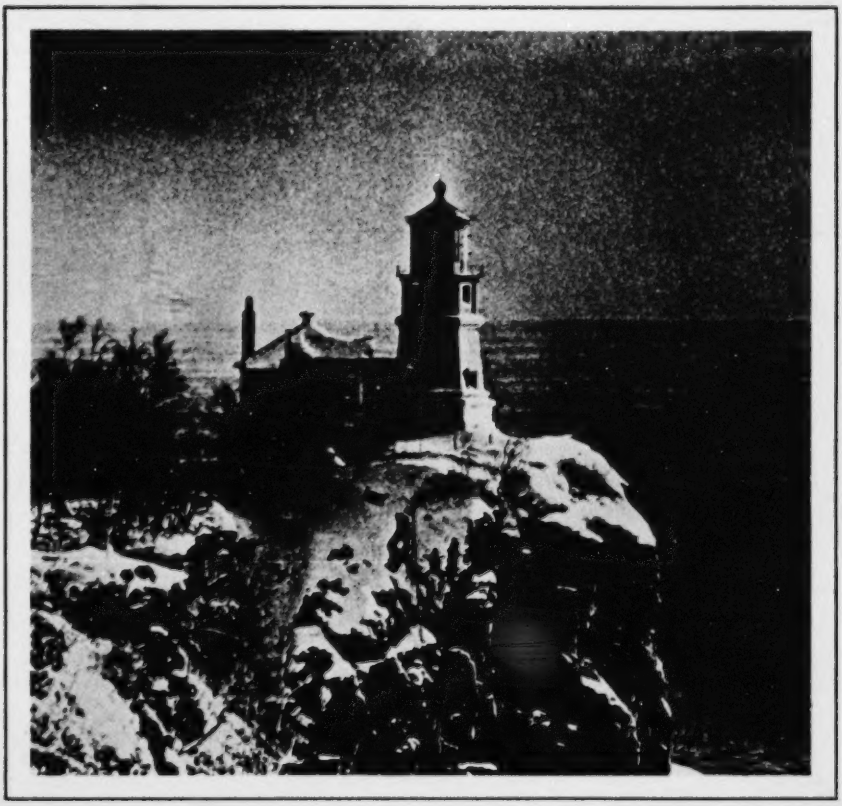
20

58 **The Great Lakes: North America's Inland Seas.** Encyclopedia Britannica Education Corp., 1971. 17 min.

This film establishes the significance of the Great Lakes in shaping the development of North America. It shows how natural barriers were overcome through the construction of the Erie Canal, Welland Canal and St. Lawrence Seaway. It also briefly considers industries that depend on the Great Lakes: fishing, lumber, mining. An adequate visual introduction to the Great Lakes. See also #4 and its cross references.

59 **Lake Superior: The Region 'til Now.** University of Wisconsin-Madison, Institute for Environmental Studies, 1973. 29 min. [1]

Starting with the clearing of a path by an icebreaker, this film runs through the seasonal changes of this large body of fresh water. Using this central thread, the film touches on various features of the Lake Superior region: commercial fishing, the lumber industry, the purity of the lake, the problem of red clay erosion and the mining of ores, especially taconite. Useful for either conservation, geography or social studies classes. See also #2 and #37.



60 **Last Fishermen.** University of Wisconsin Sea Grant College Program. Produced by Yahara Films, 1975. 26 min. [20]

The voices and experiences of commercial fishermen and their families graphically portray the plight of this industry when faced with ever-encroaching man-made regulations. Although the film presents only one side of a complex problem, its approach is human and grass roots. Could be presented in conjunction with #53. See also #41 and #61.

61 **Michigan Silver and Gold.** Pemberton Productions, 1974. 22 min. [1]

This film traces the demise of fishing on the Great Lakes, as well as attempts to revive it. It covers the early days of plentiful trout, whitefish, perch; the destructive invasion of the sea lamprey in the fifties; and the importation of coho salmon from Oregon for experimental artificial planting. A clear, concise presentation that documents chronologically the changes in fish populations. See also #53, #60 and index under FISHING.

62 **Paddle-to-the-Sea.** National Film Board of Canada, 1967. 28 min. [1]

The story of the many adventures of a little boat carved and launched high on the Canadian side of Lake Superior with the indomitable hope of a little boy that it would drift all the way out to the sea (the Atlantic Ocean). The boat's adventures—as it maneuvers through storms and floats next to large freighters—are depicted with masterful film techniques. The plot—written so eloquently by Holling C. Holling (#40)—grips the viewer until the boat finally makes it to the sea. Most effective with early jr. high viewers.

63 **The Rise and Fall of the Great Lakes.** National Film Board of Canada. 1968. 17 min. [14]

Animated and graphic description of the physical changes the lakes have been undergoing—from the glacial ages right down to the man-instigated changes: mine blasting, dam building, shipping, pollution from air and solid wastes. Bruce Mackay, who sounds like Pete Seeger, sings the narration as a folk ballad. Produced with modern film techniques and at a fast pace, this film is a delightful combination of fact and humor. See also #57 and #87.

64 **Salmon Story.** University of Wisconsin Sea Grant College Program. Produced by Yahara Films, 1973. 28 min. [20]

This film recounts the effects of salmon on man from prehistoric times to the present. A portion of the film demonstrates the incorporation of the salmon into Indian art and myth. And for modern man, there is research: odor imprinting studies involve the tagging and tracking of this superb fish to find out how salmon migrates across open waters. Aptly titled, **Salmon Story** concisely examines the myriad facets of this fascinating fish. See also #86.

65 **Story of the Great Lakes.** U.S. Coast Guard, no date. 28 min.

The only black and white film reviewed, it brings to mind a 1940s film saga complete with corny musical background and equally sappy narration.

66 **Story of Two Creeks.** University of Wisconsin–Extension, Department of Cinematography, 1969. 27 min. [1]

Reports on the geologic research of a site on the Wisconsin shore of Lake Michigan. By exposing strata on the shore, this university research team demonstrates the effects of glacial and erosive changes. A rather dry presentation, but informative from a geologic point of view. See also #57, #63, #73 and #87.

67 **Too Thick to Navigate, Too Thin to Cultivate.** WBBM-TV, 1968. 30 min. [5]

Thirty unrelieved minutes of film footage exposing the pollution problems of the Great Lakes. This "gloom and doom" documentation provides a dated view of the problems with no suggestions for solutions. Useful for historical purposes only. See also #56 and #101.

68 **Tools for Decision.** University of Wisconsin Sea Grant College Program. Produced by University of Wisconsin–Extension, Department of Photography, 1970. 28 min. [1]

This film shows the multifaceted interests that come into the fore when a decision about the environment has to be made. In this case, the problem is inadequate sewage treatment in the Green Bay region. Representatives of different interests voice their individual points of view: a Charmin Company representative, a sports fisherman, scientists with their pesticides and toxics, farmers, commercial fishermen. The film might be somewhat dated but conflict between differing viewpoints is a perennial phenomenon.

69 **Who Killed Lake Erie?** NBC News Special, 1969. Two reels, 50 min. [1]

Frank McGee narrates this unmitigated documentation of the pollution problems of Lake Erie. Of the genre of #67, this film is dated and suggests no solutions. Better viewing of the pollution problems of the Great Lakes would be #56.

Maps & Charts

The following visual aid material was obtained from various sources. Where the word map is enclosed in quotation marks ("map") it refers to the manner in which the chart cited is folded. The numbers in brackets correspond to the list of addresses found at the end of this bibliography and indicate where the material can be obtained. Free material—at least in single copy—is marked as such.

70 Department of Fisheries and Forestry. **Great Lakes Water Use.** Cartography by Department of Energy, Mines and Resources, 1974 (2nd edition). 34x56 inch chart. [2]

Text: One side: map of Great Lakes showing population density, thermal inputs by shoreline section, withdrawal and discharge from the lakes, irrigation. A smaller inset map of the Great Lakes Basin shows generalized land use. Five individual squares show the "Quantity" and "Value" of commercial fishing on each of the lakes. Also shown are "Winter Climactic Conditions" and "Physical Characteristics."

A wealth of information, clearly and attractively illustrated, for classroom use.

71 Finley, Bob E. et al. **Fishes of the Great Lakes.** Washington, D.C.: U.S. GPO, 1973. 2.5x4 ft. chart. [17]

Text: **One side:** full-color line drawings of 52 species matched by number to a list of both common and Latin names.

A commanding visual aid to hang up in any classroom. Use in conjunction with #80, #81 and #97.

72 St. Lawrence Seaway Development Corp. and the International Association of Great Lakes Ports. **Sail the Seaway and Save: Your Graphic Guide to the World's Fastest Growing Trade Route—The St. Lawrence Seaway.** Washington, D.C.: St. Lawrence Seaway Development Corp., 1974. 36x24 inch "map." Free. [3]

Text: **One side:** map showing the inland waterways, railroads, interstate highways and pipelines that extend from the Great Lakes ports throughout the country (including some that cut across Canada). Also includes comprehensive yet concise definitions of different types of cargo: bulk, general, container and other.

Sail The Seaway & Save:—Continued

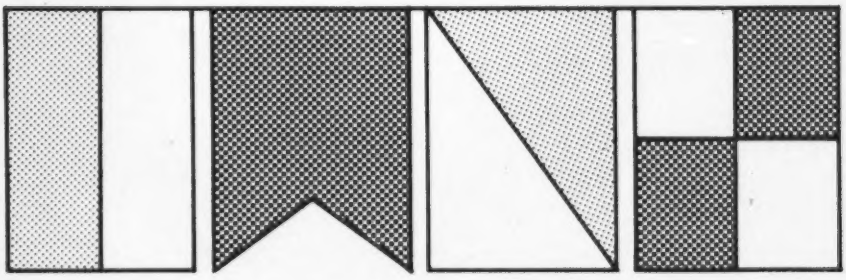
Verso: map of "The Deep Draft Ports of the Great Lakes-St. Lawrence Seaway." Includes phone numbers and pie charts showing proportionate total of imports and exports based on 1973 U.S. census of ports exceeding 50,000 tons of non-Canadian overseas commerce. A smaller map shows the St. Lawrence River section. There are also lists: "Toll and Ship Requirements," "Foreign Countries and Ports of Call Served," "Ports of Call and Steamship Lines," "Key Great Lakes Organizations," "Publications on the Great Lakes," "Lines Serving the Great Lakes," "Ten-Year Transit and Cargo Summary" (1963-1973). There is a chart showing "Approximate Sailing Distances in Statute Miles Between Great Lakes Ranges and 41 Overseas Destinations" plus 20 small b&w photos of Great Lakes ports.

A comprehensive, clear presentation of a wealth of information. See also #27, #85 and #99.

73 Slaughter, Arthur E. et al. **Stratigraphic Succession in Michigan: Paleozoic Through Recent.** Lansing: MI DNR, 1964–2nd printing 1972. 8½x11 inch chart. Free. [10]

Text: **One side:** chart of eras, formations, members, groups, etc. b&w illustrations of formations.

A detailed delineation for the serious study of Great Lakes geology. A 25x35 inch version is available for a nominal charge from the same address. See also #57, #66 and #87.



74 **Stack and Flag Chart.** St. Clair Shores, MI: Fourth Seacoast, n.d. 18x24 inch chart. [6]

Text: **One side:** top half shows stacks and flags of seaway-ocean vessels. Bottom half shows stacks of American and Canadian Great Lakes fleets. Six special flags—please assist, explosives aboard, etc.—and seven whistle signals are described. A small insert shows a profile view of Great Lakes levels.

A modest visual that would help prepare a class to identify vessels seen on a lakeshore field trip. See also #78 and #89.

75 U.S. Department of the Army. Corps of Engineers, North Central Division. **Help Yourself: A Discussion of the Critical Erosion Problems on the Great Lakes and Alternative Methods of Shore Protection.** Chicago: U.S. Department of the Army, Corps of Engineers, North Central Division, n.d. 36x24 inch "map." Free. [19]

Text: **One side:** map plus illustrations of "Great Lakes Shorelines: Problems and Solution," narrative on "Initiating Action" (citizen action), "Planning Considerations" (when combating erosion) and "Understanding Shore Erosion." Lastly a section of b&w line drawings on "Construction Guidelines" and "Construction Alternatives—Pros, Cons, and Costs."
Verso: narrative on "S andard Designs" and "Sample (government) Specifications" for antierosion constructions, plus b&w line drawings of the various standard designs described in the narrative, and samples of inadequate constructions.

Although written for owners of private shoreline property, this chart contains valuable information on steps that can be taken against erosion. Food for thought for secondary environmental science classes.

76 U.S. Department of Commerce, NOAA. **Nautical Charts.** Washington, D.C.: NOAA. Charts. [4]

There are four types of nautical charts—harbor, coast, general, sailing. Those pertinent to the Great Lakes region are listed in "Nautical Chart Catalog #4: U.S. Great Lakes and Adjacent Waterways." They are updated regularly and can be purchased from the Distribution Division in Riverdale, Maryland or from local distribution centers: map services, certain marinas or sporting goods stores and certain bookstores.

77 **Wisconsin, Michigan, and the Great Lakes.** Washington, D.C.: National Geographic Society, 1973. 23x35 inch map.

Text: **One side:** Five-color map highlighting Wisconsin and Michigan and encompassing all the Great Lakes. Shows cities, national and state forests, airports, etc. and provides some tidbits of tourist information.
Verso: "Land Between the Waters"—narrative on the Great Lakes, Michigan and Wisconsin.

This insert is a satisfactory visual for those with access to the August 1973 issue of "National Geographic." See also #111.

Booklets, Pamphlets & Paperbacks

Items that are available free (at least in single copy) are marked as such. The numbers in brackets correspond to the list of addresses provided at the end of this bibliography and indicate where these materials can be obtained.

78 **Boat Watchers' Paradise: Port of Duluth-Superior.** Leaflet. Duluth: St. Paul District, Corps of Engineers and the Seaway Port Authority of Duluth, n.d. Free. [18]

Text: **One side:** full-color illustrations of the stacks and flags most likely to be seen at this twin port.
Verso: map of this port's waterfront attractions, a labeled cross section of a freighter, profile illustrations of common Great Lakes vessels.

Although geared to Duluth-Superior, this handy pocket guide could turn any lakeshore field trip into an educational experience. See also #74 and #89.

79 Department of the Environment. **What You Always Wanted to Know About Great Lakes Levels And Didn't Know Whom to Ask®.** Booklet. Ontario: Environment Canada, n.d. 28 pp. Free. [7]

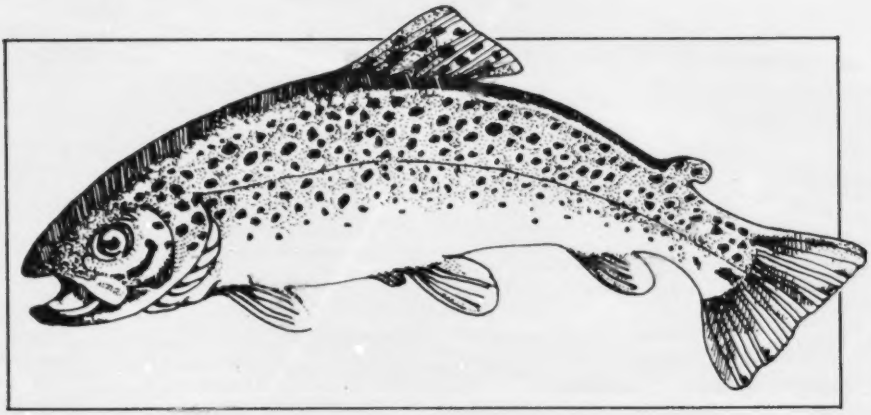
Text: tri-color line drawings, map, graph, list of water level publications.

This publication was written to answer oft posed questions about lake levels. It considers whether levels operate in cycles, types of controls possible, the possibility of water level forecasting, etc. A handy, concise compendium suitable for a unit of study on this aspect of the Great Lakes.

80 Downs, Warren. **Fish of Lake Michigan.** Illus. by Christine Kohler. Booklet. Madison: Wisconsin Sea Grant College Program, 1974. 32 pp. Free. [20]

Text: pen and ink drawings of 21 species of fish. Listed for each species are: scientific name (Latin), length, weight, coloring, common names.

This booklet opens with a five-page history of fishing in Lake Michigan from the 1830s through the 1970s. The narration accompanying each species includes information such as history of that particular fish population, delectability, breeding habits, prey and enemies. A good layman's introduction to this subject. See also #97.



81 Downs, Warren. **Fish of Lake Superior.** Illus. by Christine Kohler. Booklet. Madison: University of Wisconsin Sea Grant College Program, 1976. 36 pp. Free. [20]

Text: pen and ink drawings of 23 species of fish, lists for each species: scientific name (Latin), length, weight, coloring, common names.

By way of introduction, this booklet opens with a short history of fishing in Lake Superior—circa 1665 through the 1970s. Like **Fish of Lake Michigan** #80, this is a good layman's guide that is suitable for classroom use. It includes four species not mentioned in #80: bloater, longnose sucker, northern pike and pink salmon.

82 Engman, Elmer. **Shipwreck Guide to the Western Half of Lake Superior.** Booklet. Duluth: Innerspace, 1976. 48 pp.

Text: b&w photos of each vessel, line drawing map of underwater location. Facts given for each ship: length, beam, depth, where built, gross tonnage, net tonnage, engine, boilers, hatches.

A guide to shipwrecks told from a diver's point of view: writes of visibility under water, accessibility by boat or swimming, etc. Although the book has possibilities for a diving class, those seeking shipwreck background should look to the index under SHIPWRECKS.

83 Engman, Elmer. **In The Belly of a Whale.** Booklet. Duluth: Innerspace, 1976. 46 pp.

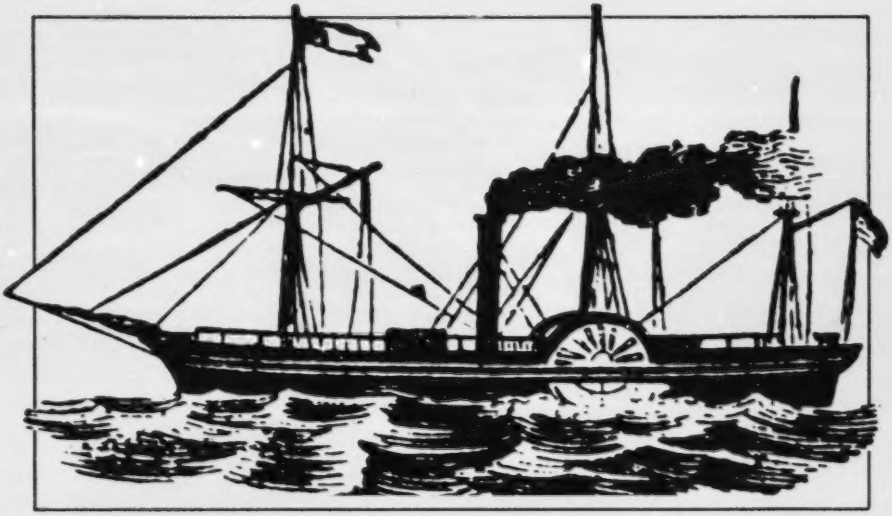
Text: b&w photos, line drawings of diving location and cross section of the whaleback.

A history of the whaleback steamer S.S. THOMAS WILSON that encompasses its launching, sinking, underwater exploration by divers and salvage attempts. Carefully researched and clearly written, this booklet provides concise, lucid documentation on the life span of a whaleback. See also #92.

84 Frederickson, Arthur C. and Lucy F. Frederickson. **Pictorial History of the C&O Train and Auto Ferries and Pere Marquette Line Steamers.** Booklet. Ludington: Lakeside Printing Co., 1965 (revised edition). 74 pp.

Text: b&w photos of ferries and steamers, table of information on vessels mentioned: name, length and width, where built, year.

Random collection of photos and facts about the ferries and steamers that plied the Great Lakes. A disjointed introduction to a less frequently studied aspect of Great Lakes shipping.



85 **Information Kit.** Massena, N.Y.: St. Lawrence Seaway Development Corp., n.d. Free. [16]

Text: contains various items on the Seaway—a booklet of questions and answers, an issue of **Seaway Review,** a copy of an annual report on the corporation, several booklets on the Seaway, etc.

Although the items included in the kit are not publications of the current year, the kit does provide a good basis for a curriculum unit on the Seaway that could be useful to either the educator or student. See also #27, #72 and #99.

86 Johnson, C. E. et al. **Getting the Most From Your Great Lakes Salmon.** Booklet. Madison: University of Wisconsin Sea Grant College Program, 1974. 27 pp. Free. [20]

Text: 1 p. bibliography, b&w photos.

Photos and description on the handling, cleaning, filleting, skinning, etc. of salmon plus five recipes. A clearly written compendium. See also #64, #93 and #96.

87 Kelley, R. W. and W. R. Farrand. **The Glacial Lakes Around Michigan.** Illus. by James M. Campbell. Lansing: Michigan Department of Natural Resources, 1967. 19 pp. [9]

Text: pen and ink drawings, map of principal morainic systems in the Great Lakes region and table of principal stages in evolution of Great Lakes listing names, levels, outlets and geological dates of entire sequence of glacial and post-glacial stages.

A condensed geological history of the Great Lakes in which several prominent lake stages associated with major glacier re-advances during Wisconsin time are described and illustrated. Although centered on the developments surrounding Michigan, this is the only account of glacial effects on Great Lakes geology readily suitable for jr. high level introductory purposes. See also #57 and #63.

88 Lake Carriers' Association. **Great Lakes Shipping: The Story of the Lakes Vessel Industry.** Booklet. Cleveland: Lake Carriers' Association. n.d. 17 pp. Free. [8]

Text: b&w photos, map of Great Lakes and connecting channels.

This booklet presents various bits of information about the Great Lakes fleet: methods of loading and unloading, products shipped, life on the lakes, a brief look into the future. Provides a good introduction into Great Lakes shipping for the beginning student not yet ready for detail. See also index under SHIPPING.

89 LeLievre, Roger; Vournakis, John; and Kevin C. Griffin. **Know Your Ships: The Seaway Issue.** Booklet. Sault Ste. Marie: Thomas Manse, 1976. 88 pp.

Text: b&w and color photos, maps, channel buoy guide, chart of flags of all nations in the marine trade, list of nautical terms, chart of mileage between ports, description of display signals for storm warnings.

A listing of the vessels—company by company—that pass through the U.S. and Canadian locks in a given year. Information for this booklet is obtained from the Corps of Engineers and the U.S. vessel registry and is updated and ready for mailing by April 1st of each year. An exhaustive source of the kind of information needed for educational experience in ship viewing on the lakes. For less detailed sources see #74 and #78.

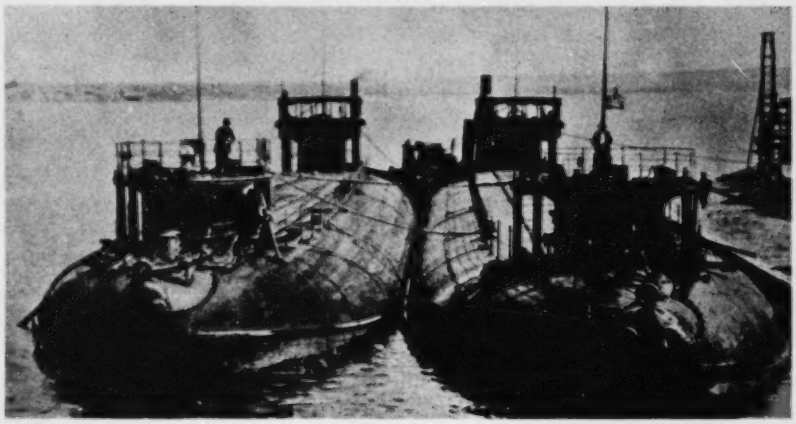
90 Lin, Leslie Y. **Maggie's Drawers Are Coming Down—and Radio Takes Over.** Booklet. Ann Arbor: Michigan Sea Grant Program, n.d. 4 pp. [10]

A concise description of the flag weather warning system used on the Great Lakes since approximately 1880. This booklet delineates the strengths of this service that have favored its existence over the past 100 years and the weaknesses, which have forced its discontinuance in favor of the radio.

91 Lydecker, Ryck. **The Edge of the Arrowhead.** Booklet. Duluth: Minnesota Marine Advisory Service, 1973. 60 pp. [11]

Text: b&w photos.

A concise description of many aspects of the Minnesota coast of Lake Superior: history, economy, environmental concerns, etc. One chapter presents notable characteristics of Lake Superior: depth, breadth, climactic conditions, water quality, lake levels, drinking water quality. This booklet has been successfully incorporated into a 7th grade social science curriculum.



92 Lydecker, Ryck. **Pigboat . . . The Story of the Whalebacks.** Booklet. Duluth: Sweetwater Press, 1973. 34 pp.

Text: numerous b&w photos, list of whalebacks 1888-1898: hull number, name, launching, renamed, fate.

This booklet is composed of three parts: narrative history of the whaleback (pp. 3-5); biography of the inventor-captain Alexander McDougall (pp. 16-24); and story of the S.S. METEOR, from construction through conversion into a museum (pp. 25-30). A concise presentation of this short-lived vessel, suitable for classroom study of this aspect of Great Lakes history. See also #83.

93 Mattingly, Rosanna. **Great Lakes Fish Cookery: Recipes for Underutilized Fish Species—Alewife, Burbot, Carp and Sucker.** Booklet. Lansing: Cooperative Extension Service, Michigan State University, 1976. 16 pp. Free. [10]

Text: 1 p. bibliography, b&w line drawings.

A collection of recipes that "have been carefully tested for taste, appearance, convenience and nutrition." Besides suggestions for care and preparation of the fish, there are also recipes for sauces and stuffings. A handy item for a fishing field trip or home economics class. See also #86 and #96.

94 Michigan Department of Conservation. **Great Lakes, Great Boats: Being a Short History of the Men and the Boats; and also of the Lakes They Sailed . . . From the Earliest Times to the Present Day.** Booklet. Lansing: Michigan Department of Conservation, n.d. 14 pp. Free. [9]

Text: b&w photos and old drawings.

Tales of Great Lakes vessels from paddle and sail to steamboat. Of questionable use and good only as an introductory source of material—the writing is elementary and only the most obvious facts about Great Lakes vessels are included. Better sources are #4 and its cross references.

95 Michigan Water Resources Commission and Michigan Department of Natural Resources. **Michigan and the Great Lakes.** Booklet. Lansing: Michigan Department of Natural Resources, reprinted 1971. 37 pp. Free. [9]

Text: b&w line drawings, 1 p. suggested reference material.

Four-to-ten page chapters encompass material on the environment, transportation, commercial fishing, shorelines, islands and water birds and recreation. Written for students, this booklet is "intended to serve only as an introduction or supplement to study of the lakes."

96 Murray, James D. and Timothie M. Arneson. **Smelt: Dip Net to Dish.** Superior Advisory Notes, No. 4. Booklet. Duluth: Minnesota Marine Advisory Service and Lake Superior Basin Studies Center, n.d. 4 pp. Free. [11]

Text: b&w line drawings.

The booklet describes how to clean, store and thaw smelt. The 18 flavor-rated recipes are grouped into four categories: baked, broiled, charcoaled and fried. A compact compilation of many sources assembled for easy reading and ready use. See also #86 and #93.

97 Price, Brian and Thomas Kelly. **Fishes of the Grand Traverse Bay Region.** Illus. by Marcia Stegath Dorr. Booklet. Ann Arbor: Michigan Sea Grant Program, 1976. 54 pp. [10]

Text: 1 p. glossary, 1 p. bibliography, chart showing location of "Sport Fishes of Selected Area Lakes," b&w line drawings.

A comprehensive yet concise guide to the fish population of the Grand Traverse Bay Watershed. Surprisingly this turns out to be quite an extensive fish population encompassing some 20 families (in the scientific sense of the word) and approximately 75 species. The information provided on the families encompasses feeding habits, habitat preferences, mode of reproduction and role in the aquatic ecosystem. Also includes a short history of the area's geological development and of the region's fish fauna. See also #71, #80 and #81.

98 Ritzenthaler, Robert E. and Pat Ritzenthaler. **The Woodland Indians of the Western Great Lakes.** Paperback. Garden City: Natural History Press, 1970. 178 pp.

Text: 52 b&w photos, 2 pp. glossary, 5 pp. bibliography, 15 pp. index.

Each chapter of the book describes different characteristics of these Indians: material culture, games, music, religious life, folklore, etc. Although the title seems promising, the book is written at a level more appropriate for a college level sociology class. See instead #28.

99 **2,342 Miles Into the Heart of a Continent: The St. Lawrence Seaway.** Leaflet. Massena, N.Y.: St. Lawrence Seaway Development Corp., n.d. 16½x24 in. Free. [16]

Text: **One side:** narrative provides introductory history, a tolls schedule, statistics on the locks and channels that make up the Seaway and a description of locking procedures.
Verso: map of lock locations, map of major ports along the Great Lakes, a profile of the Great Lakes-St. Lawrence Seaway noting location of locks and a narrative description of the Seaway passage to the Great Lakes.

A handy map-sized introduction to the St. Lawrence Seaway. See also #27, #72 and #85.

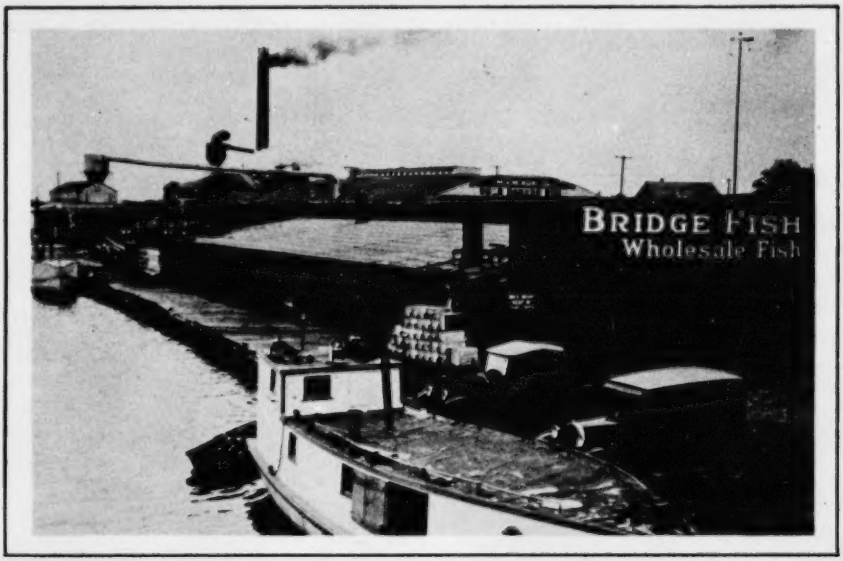
100 Weimer, Linda, et al. **ABCs of PCBs.** Leaflet. Madison: University of Wisconsin Sea Grant College Program, 1976. 6 pp. Free. [20]

Points of information include discussion of safe levels of PCBs for man, effects of PCBs on sports and commercial fishermen, where PCB pollution exists, history of the problem. Also included is a short synopsis of what's being done about PCBs in Wisconsin, the region, the U.S. and the world. A clearly written, comprehensive layman's introduction to a problem that threatens daily lives. See also #53.

101 Weimer, Linda, et al. **Our Great Lakes.** Booklet. Madison: University of Wisconsin Sea Grant College Program, 1973. 48 pp. Free. [20]

Text: b&w photos, table of "Measured Miles of Great Lakes Shorelines in the U.S.," short bibliography, list of addresses of organizations related to Great Lakes management.

This booklet considers various interactions of man—shipping, recreation, fishing, industry—with the Great Lakes, especially Lakes Michigan and Superior. Overall the approach is objective: presenting not only man's adverse effects but also his attempts to maintain this valuable resource. An easily read introduction to environmental considerations of the Great Lakes that could be incorporated into jr. high classes. See also #4, #51, #56 and #106.



102 Wilke, Wendell. **The End of the Corn Belt Fleet: The Great Lakes Reserve Destroyer Division.** Booklet. Algoma: Algoma Printing, 1972. 55 pp.

Text: b&W photos of ships.

Pertinent facts—shakedown cruise to present usage—about each member ship of a fleet that existed circa 1953-1970. This booklet provides a fact-by-fact account rather than a flowing narrative history.

103 **The World Famous Soo Locks.** Leaflet. Detroit: U.S. Army Engineer District, n.d. Free. [19]

Text: maps of the Soo area, illustration of lock operation, table of lock data and statistics of annual freight tonnage through the locks.

This leaflet provides a short, comprehensive introduction to the Soo Locks in a format suitable for classroom use.

Serials

Free material (at least in single copy) is marked as such and the numbers in brackets correspond to the list of addresses at the back of this bibliography and indicate where these serials can be obtained.

104 Boyce, Daron and Bernard DeWitt. "Great Lakes Ice Season, 1974-75: Year-Round Navigation Achieved." **Mariners Weather Log,** September 1975, pp. 277-282.

This article describes how year-round navigation was achieved through the efforts of hundreds of men and women and a governmental expenditure of over seven million dollars (1970-75). The description encompasses the fall season, extended season operations, spring operations and weather and ship problems. Although not the easiest to read, the article does provide a concise, thorough account of the effort necessary to achieve year-round navigation.

105 "The Great Lakes Slump." **Time,** September 30, 1974, p. 90

This pessimistic view of Great Lakes shipping cites the obsolescence of the St. Lawrence Seaway, inflation (fuel costs, etc.), bad labor relations. Although quite short, this article provides an interesting contrast to the viewpoint taken in #107. See also index under SHIPPING.

106 Institute for Environmental Studies and Wisconsin Sea Grant College Program. "Great Lakes." **Earthbeats,** v. 1 no. 2, 1977, 8 pp. Free. [20]

This issue contains several informative articles: one on historical background, an article on beach ecology, and an article on seven popular Great Lakes fish. One section simulates a voyage to the bottom of Lake Michigan in a diving bell. This newsletter has been written for jr. high classroom use and provides a handy source of information. See also #4 and its cross references.

107 "The New Great Lakes Fleet." **Business Week,** May 18, 1974, pp. 40, 42.

This optimistic assessment of Great Lakes shipping talks of shipping orders through 1980 for Bay Shipbuilding Corporation and American Shipbuilders Division. Juxtapose with #105 to generate an interesting discussion. See also index under SHIPPING.

108 Ragotzkie, Robert A. "The Great Lakes Rediscovered." **American Scientist,** July-August 1974, pp. 454-64. Free. [20]

Although not claiming to be exhaustive, this article adeptly surveys the largely government-sponsored research on the Great Lakes engendered in the last 10-20 years. The research topics covered include thermal structure, coastal currents, fluctuations of water levels, comparison research (with oceans and other lakes), eutrophication, fish populations, microcontaminants and a brief look at the future. Although written at an advanced jr. high-high school level, this article provides a concise assessment of the direction Great Lakes research has been taking.

109 U.S. Environmental Protection Agency, Region V. "Special Great Lakes Edition." **Environment Midwest** (entire issue), October-November 1975, 32 pp.

Included are articles on the 1972 U.S.-Canadian agreement on Great Lakes history, a woman porter on the Great Lakes, 1974 water quality, Great Lakes fisheries, etc. Written in journalese, the articles are suitable for classroom use. See also #4 and its cross references.

110 Wisconsin State Historical Society. "Great Lakes Shipping." **Badger Herald** (entire issue) January 1970, 65 pp. [21]

The **Badger Herald** views Great Lakes shipping in many different ways: song, work games, glossary, informative articles. The magazine is geared for 4th-6th grade reading. See also index under SHIPPING.

111 Young, Gordon. "Superior, Michigan, Huron, Erie, Ontario: Is It Too Late?" Photography by James L. Amos and Martin Rogers. **National Geographic,** August 1973, pp. 147-85.

A collection of observations about the Great Lakes made by the author while boating from Minnesota to New York. Clearly written, the article presents a basic overview of the issues being faced by the Great Lakes: lampreys, erosion, pollution, etc. The insert map with this issue is entitled "Wisconsin, Michigan, and the Great Lakes" #77.

Addresses

[1] Bureau of Audio Visual Instruction*
1327 University Avenue
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[2] Canada Map Office
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[6] Fourth Seacoast Publishing Co., Inc.
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[7] The Information Unit
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Canada L7R 4A6

[8] Lake Carriers' Association
1411 Rockefeller Building
Cleveland, OH 44113

[9] Michigan Department of Natural Resources
Box 30028
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[10] Michigan Sea Grant Program
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Note: Only the catalogue can be obtained from this central office. Films are obtained from various distribution points, such as #5 and #12.

[16] St. Lawrence Seaway Development Corp.
Seaway Circle
Massena, NY 13662

[17] Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

[18] U.S. Army Corps of Engineers, St. Paul District
Lake Superior Marine Museum
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[19] U.S. Department of the Army
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